Detailed Site Report for the Global Nuclear Energy Partnership

Roswell, New Mexico Site

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ENERGYSOLUTIONS

North Wind

GM Inc.

Detailed Site Report
Roswell, New Mexico

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EXECUTIVE SUMMARY

The Global Nuclear Energy Partnership (GNEP) is an initiative of the United States to work with other nations to develop and deploy advanced nuclear recycling and reactor technologies. The purpose of this initiative is to help provide reliable, emission-free energy with less waste burden of older technologies and without making available separated plutonium that could be used by rogue states or terrorists for nuclear weapons. These new technologies will make possible the use of safe, clean nuclear energy to help meet the growing global energy demand.

The Department of Energy (DOE) is the lead agency to implement the GNEP initiative and has developed a strategy that includes the pursuit of three key facilities:

1. A Consolidated Fuel Treatment Center (CFTC), led by industry to separate components of spent fuel required by GNEP;

2. An Advanced Burner Reactor (ABR), led by industry to burn the actinide-based fuel to transform the actinides to a waste form for easier storage and to produce electricity; and

3. An Advanced Fuel Cycle (Research) Facility, led by the national laboratories, to be located at a government site.

In November, 2006 DOE awarded multiple grant awards to perform 11 separate siting studies to determine the possibility of hosting an advanced nuclear fuel recycling center and/or an advanced recycling reactor. The purpose of these siting studies, which address sixteen (16) predefined sections, is to provide DOE with sufficient information to understand the overall character and local environment of the proposed sites that could be affected by the GNEP facilities.

This Detailed Siting Report (DSR) describes the overall character of the Roswell site and its local environment. Using the best and most current readily available public reference material, it describes the proposed site setting and the environment that could be affected. The Environmental data presented in this DSR will be used to support preparation of the GNEP Programmatic Environmental Impact Statement (PEIS).

The Roswell site is being proposed by the team of Energy*Solutions*, LLC (Energy*Solutions*), Gandy Marley, Inc. (Gandy Marley), and North Wind, Inc. (NWI). The site, which is privately owned by Gandy Marley, consists of 920-acres located in Chaves County in southeastern New Mexico. The site is currently undeveloped and is surrounded by undeveloped ranchland. The site is comprised of two contiguous parcels. The western 480-acre parcel was previously zoned by Chaves County for industrial use by the Triassic Park Hazardous Waste Disposal Facility (HWDF). The Triassic Park HWDF permit was issued by the New Mexico Environmental Department (NMED) in March 2002.[a] It is anticipated that the adjacent 440-acre parcel can be zoned for industrial use as well. The Roswell site is of sufficient size to locate either or both of the planned GNEP Demonstration Facilities – the CFTC and the ABR. There is sufficient room to provide suitably sized feed buffer and interim waste product storage capability. The owners of this site have water rights and access to a reliable source of water from the Ogallala Aquifer.

[a] Although the Triassic Park HWDF permit was issued in 2002, the facility has not been constructed and there are currently no plans to build the facility.

Section 1, Maps – The Roswell site is located in the arid high desert ranchland of east-central New Mexico's Chaves County, 40 miles east of Roswell. The Roswell site is wholly located in Chaves County 3 miles west of the Chaves/Lea County line, in Township 11 South, Range 31 East, Sections 17 and 18 New Mexico Prime Meridian Public Land Survey System. The centroid of the site is at 33.368 degrees north latitude and 103.851 degrees west longitude.

- The Roswell site is surrounded by undeveloped, private rangeland to the north, east and south and land managed by the United States Bureau of Land Management to the west.
- Currently there are no existing structures or facilities within the boundaries of the site. The only nearby facility within a 6-mile radius of the site is a surface waste management facility owned by Gandy Marley and permitted by the New Mexico Oil Conservation Division.
- One historical site (the Backus Windmill) is located within a 6-mile radius of the site.
- The only "water bodies" present are depressions that collect ephemeral runoff from local precipitation or snowmelt. Water is provided to the Roswell site from wells in the Ogallala aquifer less than 2 miles to the east.
- The Roswell site is located 3 miles south of U.S. Highway 380, which leads to U.S. Highway 290 approximately 35 miles to the west. State road 172 is 3-miles east of the Roswell site.
- Rail access may be obtained along a trunk line running from Roswell northeast to Elida and Portales. The shortest linear distance to the rail line is 30-miles northwest of the Roswell site.
- Approximately 3.5 miles of improved road would be needed to provide access for facility construction and operations.
- Within the 50-mile radius of the Roswell site there are three major civil divisions: Roswell, Artesia, and Lovington.

Section 2, Aquatic and Riparian Ecological Communities – The Roswell site is situated in a remote location that has no fish or shellfish present due to a lack of surface water within or adjacent to the proposed site. Nevertheless, important riparian ecological communities within the site locality have been addressed in sufficient detail to allow for the proposed environmental reviews and led to the conclusions that:

- There is no aquatic, riparian, or wetland habitat at the Roswell site.
- There is one man-made pond (Red Tank) near the center of the Roswell site that collects rainstorm runoff, but it does not support any aquatic, riparian, or wetland vegetation.
- A number of aquatic, riparian, or wetland communities exist within a 50-mile radius of the Roswell site. The Pecos River is the nearest large river and is located approximately 35 miles away from the site at its nearest point. These areas would not be affected by construction or operation of the GNEP facilities.

Section 3, Water Resources – The Roswell site is situated in the Roswell Artesian Underground Water Basin (UWB), near its boundary with the Lea County UWB. The Roswell UWB is an administrative unit that includes several aquifers, including an alluvial aquifer about 35 miles west of the site along the Pecos River, the Roswell Artesian Aquifer, local perched ground water bodies near the site, and ground water in formations beneath the site. Formations beneath the site yield little ground water and water quality is considered poor. The western boundary of the Ogallala Aquifer coincides with Mescalero Ridge about 1 mile east of the site. The Ogallala is the only aquifer within 10 miles that is known to yield large amounts of ground water, and hence it is a likely source of water for GNEP facilities. The closest major body of perennial surface water is the Pecos River, located approximately 30 miles west of the site at its nearest point. Ephemeral surface water at the site is derived exclusively from local precipitation and snowmelt.

A review of the most current information based on readily available and existing literature led to the following conclusions:

- Water from the Ogallala Aquifer is available within approximately 3.5 miles of the site.
- Ground water beneath the site is not of sufficient quality or quantity to support large scale beneficial use.
- No ground water wells have been completed at the site and no new water production wells are planned or anticipated.
- Ground water extraction from the Ogallala Aquifer will not affect aquatic or riparian communities at or near the site.
- There is no surface water or ground water that would be affected by discharges from the Roswell site.
- The Ogallala Aquifer is not vulnerable to impacts from environmental contamination originating in the vicinity of the site. There are no known sources of contamination that could impact the Ogallala Aquifer near the site.

Section 4, Critical and Important Terrestrial (Plant and Animal) Habitats – The Roswell site is at a remote location where human activities have the potential to disturb plant or wildlife habitat at or near the proposed site. Review of the critical and important terrestrial habitat surrounding the Roswell site led to the conclusions that:

- There is no critical habitat at the site.
- The most important terrestrial habitat at the site is that associated with the sand dune/shinnery oak habitat on the western portion of the site.
- The ecological sites in the area provide habitat for the lesser prairie-chicken (*Tympanuchus pallidicinctus*) and for the sand dune lizard (*Sceloporus arenicolus*), both of which are federal candidate species.
- Because of the abundance of similar habitat in the region, it is expected that construction and operation of the GNEP facilities would not have any detrimental effects on populations of plants or animals in the region.

Section 5, Threatened or Endangered and Special Concern Species – Literature and field surveys were conducted to identify threatened, endangered, and species of special concern or other suitable habitat that occur within or near the Roswell site. The following conclusions were reached based on these surveys:

- Of the thirty-six (36) species identified as occurring within Chaves County, suitable or marginally suitable habitat is present within or adjacent to the Roswell site for only eight (8) of these.
- Of these eight species, the only two species that have been documented within or adjacent to the Roswell site are the sand dune lizard and lesser prairie chicken.
- There is only marginal habitat for the other six species of concern (northern aplomondo falcon, baird's sparrow, western burrowing owl, black-tailed prairie dog, swift fox and Townsend big-eared bat).

Section 6, Regional Demography – The Roswell site is located in the sparsely populated arid high desert ranchland of eastern New Mexico. The results of the demographic evaluation show:

- This region is sparsely populated (fewer than 0.1 people per square mile within 20 miles of the Roswell site) with the vast majority of the population found in urban areas located more than 40 miles from the Roswell site.
- The average population density within 50 miles of the Roswell site is less than 12 people per square mile.
- Minority populations within 50 miles of the Roswell site are located in parts of Roswell and Dexter (in Chaves County), Artesia (in Eddy County), and Lovington (in Lea County).
- Low-income populations within 50 miles of the Roswell site are located in parts of Roswell and Hagerman (in Chaves County), Artesia (in Eddy County), and Lovington (in Lea County).
- Overall population within 50 miles has remained relatively stable and is generally projected to remain near current levels or increase slightly over the next 20 years.
- The most prominent areas of employment are in the agriculture, forestry, fishing, hunting, and mining sectors, the unemployment rate is below the national average, and the employment growth rate is above the national average.
- Much of the land in this region is private ranchland or is owned and/or administered by federal and state agencies which support numerous recreational areas throughout southeastern New Mexico.
- Social services and public facilities are concentrated in the more populated cities.

Section 7, Historical, Archaeological, and Cultural Resources – A review of the most current information based on readily available and existing files and field surveys of the Roswell site indicates:

- There are no off-site historical, archaeological, or cultural resources that would be affected by the proposed GNEP facilities.

- On-site historical, archaeological, and cultural properties on the Roswell site can be isolated to prevent the potential to be disturbed by construction and operation of the GNEP facilities.

- No previously recorded cultural resources exist within the Roswell site boundaries.

- Ten newly recorded sites, 12 previously recorded sites, and 57 isolated occurrences of historical and archaeological properties were identified adjacent to or within the site boundaries during file reviews and site surveys.

- The 12 previously recorded sites are adjacent to but not located within the Roswell site boundaries.

- Of the 10 newly recorded sites, three of the sites are eligible for inclusion on the National Register of Historic Places and seven of the sites are potentially eligible for inclusion on the National Register of Historic Places.

Section 8, Future Projects –There are no cities or towns within 6 miles of the site and consequently there are no plans for commercial, residential, or industrial projects. There is one industrial facility approximately 1-mile north of the site, but there are no current plans for expansion or additions to the facility.

- The only known projects in Chaves county in the vicinity of the site are the installation of a cellular transmission tower approximately 1 to 2-miles NE of the site and the installation of a LPG transfer line booster pump station located on Mescalero Ridge.

- Mr. Robert W. Marley, owner of land along the Mescalero Ridge, has previously given consideration to developing a wind farm on his property, but has no firm plans to implement the project.

Section 9, Geology/Seismology – The Roswell site is located approximately 40 miles east of Roswell, New Mexico in the Pecos River Valley Section of the Great Plains Physiographic Province. Terrain within this section ranges from low-lying plains to rugged canyons. The characterization of the Roswell site's geology and seismology shows that:

- The site is set in a location of primarily Triassic and Permian sediments that were emplaced in both marine and non-marine depositional environments. The combined thickness of these sediments is approximately 9,000 feet at the site. A relatively thin veneer of Quaternary eolian deposits, ranging in thickness from a few feet to as much as 60 feet, overlies these sediments.

- There are no surface faults within or adjacent to the project site. Furthermore, no faults were identified in the underlying Triassic sediments during the most recent drilling study. There are no mapped faults located within 50 miles of the site in any direction.

- The nearest tectonic center to the site is the Rio Grande Rift, approximately 100 to 200 miles west of the site. There have been no earthquakes of magnitude 3 or larger in either the pre-instrumental or instrumental time periods within 50 miles of the site.

- Of the 101 faults located within a 200-mile radius of the site, only eight faults exceeded the minimum length specified by Appendix A of 10 CFR 100. Six of these eight were deemed to be capable.

- The closest significant rift-related fault is 123 miles from the site.
- No site-specific evidence of subsurface material failure during previous earthquakes was observed during previous characterization studies at the site.
- Predicted ground motion values are relatively low (peak ground acceleration 0.01 to 0.05 times gravity for 10 percent probability of exceedance in 50 years; 0.04 to 0.12 g for 2 percent probability of exceedance in 50 years).
- Owing to the physical properties of soils in the site location, foundation conditions are straightforward.

Section 10, Weather/Climatology – The Roswell site is at a remote location that has no site-specific meteorological data but climatological data at six nearby National Weather Service stations was reviewed and summarized. This information represents the best available data to support analysis of potential environmental impact of constructing and operating the proposed GNEP facilities. Review of the weather and climatological conditions surrounding the Roswell site over the most recently available 30 years (1971-2000) indicates that:

- The site location has a mild, arid to semiarid, continental climate. The normal daily average temperature ranges from 38.0°F in January to 80.8°F in July; the normal precipitation ranges from 0.34 inch in January to 3.06 inches in July; and the normal wind speed ranges from 6.9 mph in December/January to 9.8 mph in April.
- Occasional extremely low temperature (approximately -23°F) in the winter, and high wind speed in the summer in Roswell (over 73 mph, 40 miles west of the Roswell site), may limit construction activities at the site. Effective work planning and scheduling can mitigate the impact of those extreme weather conditions.
- The topography in the area is characterized by gently down-sloping topography to the west, a 200-ft abrupt change in elevation along the Mescalero Ridge through the center, and uniform topography to the east and does not appear to have a major influence on local climate.
- New Mexico, in general, has no instances of hurricanes; the site is inland and does not border on any major coastline. Any hurricane moving over land will quickly diminish and downgrade to heavy rains.
- The likelihood of a tornado occurring within any 1,000 square mile area in New Mexico is very small. New Mexico has on average nine tornadoes per year.
- There are no non-attainment areas for the National Ambient Air Quality Standards within a 50-mile radius of the site.
- There is no evidence of severe environmental consequences associated with the weather/climatology for the construction and operation of the GNEP facilities.

Section 11, Hydrology/Flooding – The Roswell site is characterized as a sloping plain with low relief hummocky wind-blown deposits, sand ridges, and dunes. The Mescalero Ridge escarpment is one of the most prominent topographic features in the area and has approximately 200 feet of relief. The site is

isolated from streams and rivers that could be sources of flooding, and the site is far from identified flood plains. A review of the hydrology and flood sources for the Roswell site indicates:

- The proposed site is not within any of the 10, 50, 100, or 500-year floodplains delineated in FEMA studies.
- The nearest floodplain is the Pecos River near Roswell which is over 30-miles west of the perimeter of the study site.
- Upgradient sources of surface water are bounded by the Mescalero Ridge escarpment. The small area (<1 square mile) of the watershed upstream of the site will limit floods.
- Run-on to the site from perennial streams does not occur and only flooding from local precipitation events is possible.
- Data represented within this section does not present evidence of severe environmental consequences associated with the hydrology/flooding for the construction and operation of the GNEP facilities.

Section 12, Regulatory and Permitting – National, state and regional regulatory and environmental requirements were reviewed and analyzed to identify permits, approvals, and procedures that could impose requirements on GNEP facilities developed and operated at the Roswell site, and to pinpoint any requirements that might impose barriers to siting such facilities.

- No legislative or regulatory prohibitions that might prevent siting GNEP facilities at Roswell were identified, and no processes that contained requirements capable of barring such facilities were found.
- The body of data developed in the overall site study uniformly indicates that needed permits and approvals will be obtainable.

Section 13, Construction Costs –Relative costs for all elements of Heavy Construction in the Roswell area were obtained from the commercially available RS Means CostWorks 2007 database generated by Reed Construction Data. This database shows:

- The weighted average Heavy Construction index for the Roswell site is 0.891, indicating that this area experiences significantly lower construction costs than the national average.

Section 14, Storage Capability – The Roswell site is currently undeveloped with no existing facilities.

- The site is 920 acres in size and exceeds the minimum DOE size requirements for locating both the CFTC facility and the ABR facility.
- There is sufficient room to provide suitably sized construction zones, develop adequate feed buffer and interim waste product storage capability, and site supporting storage and ancillary facilities.
- In addition, Mr. Robert W. Marley, a principle in Gandy Marley, Inc. owns 10,000 acres contiguous to the site. This land or portions thereof could be made available as necessary to support potential future site expansion and storage capability.

Section 15, Other Facilities – There are two existing facilities that involve potentially hazardous materials located within 5 miles of the Roswell site. These are:

- A surface waste management facility, owned by Gandy Marley and permitted by the New Mexico Oil Conservation division, which accepts non-hazardous oil field waste for disposal in landfill cells.

- A liquid petroleum gas (LPG) distribution pipeline routed adjacent to State Highway 380 approximately 3.5 miles north of the site. This pipeline is owned and operated by the Cortez Gas Pipeline Company.

- The nearest significant airport is the regional airport located in Roswell approximately 40 miles to the west.

Section 16, National Priorities List (NPL) and the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database – A search of EPA's databases shows:

- No part of the Roswell site appears or has ever appeared on the NPL.

- No part of the Roswell site appears or has ever appeared in CERCLIS.

Conclusions

In summary, the DSR demonstrates that the Roswell site is suitable for consideration and evaluation in the PEIS for location of the proposed GNEP fuel treatment and reactor facilities.

- Based on a review of national, state and regional regulatory and environmental requirements, no legislative or regulatory prohibitions for the site were identified and the site does not appear on any EPA databases.

- There are no site groundwater or surface water issues. The site owners have existing water rights from the Ogallala Aquifer source to the east of the site and additional rights from existing state allocations can be purchased if required.

- The site has no designated critical habitat within its boundaries. While it does have habitat suitable for two species of concern, the sand dune lizard and lesser prairie chicken, there is an abundance of similar habitats to the west of the site.

- There is a limited but typical number of historical, archaeological or cultural resources associated with southeastern New Mexico located onsite. However, these occurrences can be isolated to prevent the potential disturbance by construction and operation.

- The site is located in an area of stable but relatively low population with favorable climatological and geological, hydrological and seismic conditions.

- The site is a Greenfield site, with no significant nearby hazardous facilities, making it easily adaptable to the needs of the GNEP facilities and their infrastructure. There is nearby highway and rail access and the weighted costs of heavy construction in the region are only 89 percent of the national average.

INTRODUCTION

To meet growing demands for electricity, both nationally and globally, the Department of Energy (DOE) has established the Global Nuclear Energy Partnership (GNEP). The goal of GNEP is to develop a world-wide consensus on expanding the use of economical, carbon-free nuclear energy. A plentiful, reliable supply of energy is the cornerstone of sustained economic growth and prosperity. Nuclear power is the only proven technology that can provide abundant supplies of base-load electricity without air pollution or emissions of greenhouse gases. GNEP is a comprehensive strategy to:

1. Increase U.S. and global security,

2. Reduce the risk of nuclear proliferation,

3. Provide fuel services to developing nations that limit use to power generation, and

4. Improve the environment.

GNEP will strive to provide safe expansion of clean, affordable power through (1) a major research and development initiative to establish the technical basis for reactor design and full fuel cycle management and (2) a major international policy initiative that addresses reactors, fuel supply, and reduction of potential for proliferation.

Two initiatives that address two key barriers to full development of nuclear power in the latter half of the twentieth century are: (1) how to use sensitive technologies responsibly in a way that protects global security and (2) how to dispose of waste safely. GNEP focuses on overcoming these barriers and doing so in cooperation with other advanced nuclear nations, to bring the benefits of nuclear energy to the world safely and securely.

In Fiscal Year 2007, funding was provided to initiate development of technology, and continue collaboration among industries and other nations. This collaboration builds on proven capabilities of the nuclear industry and fuel cycle nations to bring commercial-scale, advanced fuel-cycle technology into operation in the U.S. as quickly as possible. There are three facilities that are key to development and implementation of GNEP as listed below.

i. An Advanced Fuel Cycle Facility designed and directed by the U.S. National Laboratories that would be a modern, state-of-the-art laboratory to serve fuels research needs over the next 50 years.

ii. A Consolidated Fuel Treatment Center capable of separating the usable components in light water spent fuel from the waste products.

iii. An Advanced Burner Reactor capable of production of electricity consuming the usable products from spent fuel.

The first facility will be deployed at a national DOE laboratory. The DOE has awarded grants for siting studies to determine the suitability of 13 proposed sites and eleven locations, including the Roswell, New Mexico site, for the second and third facilities. Detailed requirements and design criteria for these facilities have not yet been established and specific footprint and operational details are not currently known.

The Detailed Site Report (DSR) for the Roswell, New Mexico site is presented in the following pages. The DSR describes the environment, physically, biologically, and socioeconomically, that could be affected by development and operation of the GNEP facilities. The Roswell GNEP DSR is organized into the following 16 sections:

1. Maps;
2. Aquatic and Riparian Ecological Communities;
3. Water Resources;
4. Critical and Important Terrestrial Habitats;
5. Threatened or Endangered/Special Concern Species;
6. Regional Demography;
7. Historical, Archaeological, and Cultural Resources;
8. Future Projects;
9. Geology/Seismology;
10. Weather/Climatology;
11. Hydrology/Flooding;
12. Regulatory and Permitting;
13. Construction Costs;
14. Storage Capability;
15. Other Facilities; and
16. National Priorities List /CERCLIS[b].

[b] Comprehensive Environmental Response, Compensation and Liability Information System.

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FIGURES

TABLES

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ABR	Advanced Burner Reactor
ACEC	Area of Critical Environmental Concern
AEA	Atomic Energy Act
AHPA	Archaeological and Historic Preservation Act
AIRFA	American Indian Religious Freedom Act
AMS	American Meteorological Society
AQB	Air Quality Bureau
ARMS	Archaeological Records Management Section
ARPA	Archaeological Resources Protection Act
ASOS	Automated Surface Observing System
AUM	animal unit month
bgs	below ground surface
BLM	Bureau of Land Management
CAA	Clean Air Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CFTC	Consolidated Fuel Treatment Center
CID	Construction Industries Division
COL	combined license
COOP	Cooperative Observer Program
CWA	Clean Water Act
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation

DSR	Detailed Site Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ESP	Early Site Permit
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
g	gravity
GIS	geographic information system
GNEP	Global Nuclear Energy Partnership
gpd	gallons per day
gpm	gallons per minute
GPS	global positioning system
HAP	Hazardous Air Pollutants
HWA	Hazardous Waste Act
HWB	Hazardous Waste Bureau
HWDF	Hazardous Waste Disposal Facility
IO	Isolated Occurrence
kv	kilovolt
LPG	liquefied petroleum gas
LQG	large-quantity generator
LWR	light-water reactor
Ma	magnitude
MLRA	Major Land Resource Area
MM	moment magnitude

mPa	megapascal
MPF	Maximum Probable Flood
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NCDC	National Climatic Data Center
NEAP	Natural Events Action Plan
NEIC	National Earthquake Information Center
NEPA	National Environmental Policy Act
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMAC	New Mexico Administrative Code
NMBMMR	New Mexico Bureau of Mines and Mineral Resources
NMCRIS	New Mexico Cultural Resource Information System
NMDGF	New Mexico Department of Game and Fish
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environmental Department
NMFS	National Marine Fisheries Service
NMOSE	New Mexico Office of the State Engineer
NMSA	New Mexico Statutes Annotated
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
NRCS	Natural Resources Conservation Service

NRHP	National Register of Historic Places
NSPS	New Source Performance Standard
NSR	New Source Review
NWI	National Wetland Inventory
NWR	National Wildlife Refuge
NWS	National Weather Service
OAQPS	Office of Air Quality Planning and Standards
OCD	Oil Conservation District
OHV	Off-highway Vehicle
OSHA	Occupational Health and Safety Act
PCF	pounds per cubic foot
PE	probability of exceedance
PGA	peak ground acceleration
PM	particulate matter
PSD	Prevention of Significant Deterioration
PSHA	Probabilistic Seismic Hazard Analysis
PSI	pounds per square foot
RCRA	Resource Conservation Recovery Act
ROI	Region of Influence
SCS	Soil Conservation Service
SDWA	Safe Drinking Water Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SSC	species of special concern
SWDA	Solid Waste Disposal Act
TDS	total dissolved solid

TSDF	Treatment, Storage, and Disposal Facilities
USACE	U.S. Army Corps of Engineers
USBM	U.S. Bureau of Mines
USCS	Unified Soil Classification System
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
UWB	Underground Water Basin
WATERS	Water Administration Technical Engineering Resource System
WCS	Waste Control Specialists
WIPP	Waste Isolation Pilot Plant
WMA	Wildlife Management Area
WQB	Water Quality Bureau
WSSN	Worldwide Standardized Seismographic Network